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Higher economic growth and lower population growth Why school attendance is so important for girls

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Education provides the initial spark for socio-economic progress. Education for girls in particular decreases the risk of poverty for entire families in the medium term. It improves the health of mothers and their children while helping women to avoid premature, unwanted pregnancies. This is fundamental for putting the brakes on population growth, primarily in parts of Asia and Sub-Saharan Africa.

Girls are disadvantaged with regard to education

Currently, around 263 million children and young people across the world are not able to attend a primary or secondary school. That equates to around a fifth of all children and young people in this age bracket. Although the figure, which stood at 375 million¹ in 2000, has improved considerably, access to education remains limited in many parts of the world, particularly

for girls. Girls make up 53 % of the children at primary school age who do not attend school. Approximately half of them, that is 16 million girls, will presumably never go to school at all.² Discrimination against girls is prevalent in Sub-Saharan Africa, especially at secondary school level. In countries such as Chad and the Central African Republic, less than 15 % of 12 to 15 year-old girls attended lower secondary school in 2014. For boys, the proportion in education was twice as high.³

According to the *Sustainable Development Goals*, by 2030 all boys and girls across the world will complete primary and secondary school education. Particularly for countries with high population growth, this presents an enormous challenge. In many places, children are being born at a faster rate than it is possible to build

schools or train teachers for them. In Niger in West Africa, for example, six million children will reach school age by 2030, in addition to another four million who are already not attending a school.⁴

Educating girls reduces poverty

Approximately 200 million illiterate people live south of the Sahara desert. Of these, 59 % are women.⁵ Such people hardly stand a chance to equally participate in a globalised society. For girls and young women, attending school provides them with the opportunity to pursue life goals that include more than motherhood alone. In many cases, however, they are currently denied this opportunity. Only 21.5 % of all economically active women in Sub-Saharan Africa are employed in paid positions. Just under half of them are informal workers, mostly with no social security. About a third work unpaid in family-run busi-

¹ UNESCO Institute for Statistics (2016): Data Center. Montreal. www.uis.unesco.org.

² UNESCO (2016): Global Education Monitoring Report – Gender Review. Creating Sustainable Futures for All. UNESCO Publishing, Paris.

³ PRB (2015): World Population Data Sheet - Secondary School Enrollment Ratio, by Gender. <http://www.prb.org/DataFinder/Topic/Rankings.aspx?ind=320>, (Accessed: 14/11/16).

⁴ UNICEF (2015): The Investment Case for Education and Equity. New York.

⁵ See footnote 1.

nesses.⁶ Women are often only able to obtain a better paid job if they possess a higher degree of education.

According to the global average, for each additional year of school or training completed, there is an average gain of approximately 10 % in income over lifetime. The higher the quality of education, the greater its influence. And added value increases with each year of education. At 11.6 %, the returns made from educating women are higher than for men, where the figure for the latter is 9.6 %.⁷ Countries south of the Sahara witness the highest average figures at 13 %, while North Africa and the Middle East have the lowest at between 2 and 3 %, where women are less likely to find an occupation relevant to their qualifications.⁸



The number of children in any one age bracket that attend school depends greatly on the region of the world. In developed countries, it is simply normal for all children of secondary school age to attend school. In contrast, only 40 % of girls and 46 % of boys in Sub-Saharan Africa attend secondary school.

Educating girls improves health

Higher income from women means more money is invested in the family for food, doctors' appointments, medicine and, of course, educating the children. In all countries for which there is data available, a higher level of education on average results in better health. On the one hand, this is due to a higher income. On the other hand, people who are better educated have easier access to medically relevant information and are more likely to be convinced of the benefits of health care. A study in South Africa shows that women who have completed school education are at considerably

lower risk of contracting HIV than those without any educational degree.⁹

Almost everywhere, the probability of small children surviving to adulthood increases in correlation to the mother's level of education. The father's level of education however is less relevant. The effect of income also appears to be comparably small: child mortality is higher in wealthier families with less well-educated mothers than in poorer families with educated mothers. Since education provides one with abstract thinking skills, educated women have a better understanding of why using boiled water protects a child from fatal diarrhoea, for example. Moreover, they are able to communicate more easily with medical staff and understand the instructions on pharmaceutical packaging, or grasp the benefits of sex education and family planning.¹⁰

Educating girls decelerates population growth

High child mortality is not only a sign of poor living conditions - It also leads to persistently high fertility rates, as for many parents in developing countries, children are a form of social

security. Couples often decide to have fewer children only once they can be sure that their offspring has a clear chance at surviving. According to statistics, the average number of children per woman drops with a delay once there is a downturn in child mortality. At first glance, this does not necessarily reduce population growth, since considerably more children survive. In the past, however, the decrease in the number of children per woman had a consistently greater effect than a downturn in mortality. As a result, all countries that have gone through this demographic process have also experienced a downturn in population growth.¹¹

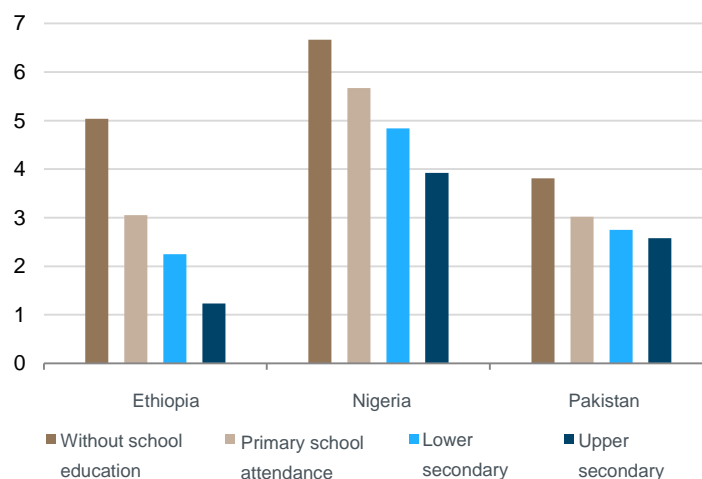
Educated girls marry later

Girls living in less developed countries are often married off early. A third of all 15-year old girls in Chad or Niger are married or in a quasi-marital relationship. Attending school can, at least for a time, keep girls off the marriage market. UNESCO estimates

Educated women have fewer children

The particular significance of secondary education

Average number of children per woman in relation to their level of education



Source: Wittgenstein Centre

⁶ ILO (2015): Key Indicators of the Labour Market. Status in Employment. KILM 9th Edition, Geneva.

⁷ UNFPA (2016): World Population Report 2016 – Summary. Deutsche Stiftung Weltbevölkerung (German Foundation for World Population), Hanover.

⁸ Montenegro, C.E. and Patrinos, H.A. (2014): Comparable Estimates of Returns to Schooling around the World. The World Bank Group. Policy Research Working Paper, p. 2.

⁹ Pettifor, A.E. et al. (2008): Keep them in school: the importance of education as a protective factor against HIV infection among young South African women. International Journal of Epidemiology, 37, pp. 1266–1273.

¹⁰ Klingholz, R. and Lutz, W. (2016): Wer überlebt? Bildung entscheidet über die Zukunft der Menschheit. Campus, Frankfurt.

¹¹ Berlin Institute for Population and Development (2011): Afrikas demografische Herausforderung. Wie eine junge Bevölkerung Entwicklung ermöglichen kann. Berlin. www.berlin-institut.org.

that around one million child marriages across the world could be prevented if girls completed secondary education.¹²

Women who marry later and receive more education have fewer children and the time span between births becomes longer. Consequently, the health of mothers and children also increases. On average, educated women prefer having fewer children and they have a greater say in decisions about family size. In addition, they are more aware of family planning methods and are more likely to use them.¹³ Investments in educating girls to secondary level have proven to be particularly effective in this regard. In many less developed countries, women who have at least completed secondary education have only half as many children as those who have only attended primary school or never been to school at all.

Since data is available for almost every country in the world regarding the average number of children per woman categorised by the mother's education, population estimates can be made in relation to future investment in education. Three different scenarios result: the first is the *constant enrollment rate scenario*, where the percentage of pupils attaining a given level of qualification remains at the current figure; the second is the *global trend scenario*, which provides continual support for progress, such as in the expansion of education as seen in previous years; the third is the *fast track scenario*, which assumes a dynamic development process in education as seen for example in South Korea, one of the Four Asian Tigers.

Enormous differences in population development can be observed, because the women in each of these scenarios result in having a different number of children. In Ethiopia, for example, where today 99 million¹⁴ people live, scenario 1 results in a total population of 183 million in 2050, compared to scenario 3 where only

¹² UNICEF (2011): The State of the World's Children 2011. Adolescence: An Age of Opportunity. New York.

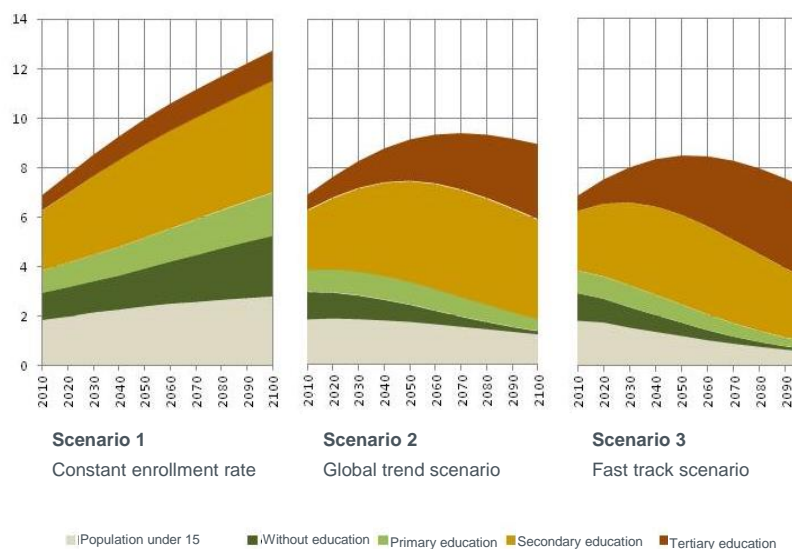
¹³ See footnote 11.

¹⁴ United Nations Department of Economic and Social Affairs (2015): Population Division. World Population Prospects – The 2015 Revision. www.un.org/en/development/desa/population/.

Looking to the future

Results in the education sector are decisive for population development

Development of global population (in billions) according to various education scenarios



Source: Wittgenstein Centre

143 million¹⁵ people are expected to be alive in 2050. Nigeria would see a population growth from the current 182 million¹⁶ to 435 million if no further improvements were made to the education sector; investments made in the same vein as the East Asian economies would see growth to just 333 million.¹⁷

World population of 10 billion?

In the first scenario, the world population would reach the 10-billion mark by about 2050. In the third scenario, however, it would only reach approximately 8.5 billion. Deviations could be even larger in the long term: By 2100, the world population figure could deviate by around 4 billion, depending on the efforts made to improve education.¹⁸

Bangladesh and Pakistan are good examples to illustrate the differences in the future development of individual countries depending on their investment in the education of girls. These two countries share a common cultural and religious history. Until 1971, Bangladesh and Pakistan formed one state. Although Bangladesh was in a

¹⁵ Wittgenstein Centre for Demography and Human Capital (2015): Wittgenstein Centre Data Explorer. Version 1.2 2015. Vienna. www.wittgensteincentre.org/dataexplorer.

¹⁶ See footnote 14.

¹⁷ See footnote 15.

¹⁸ See footnote 10.

considerably poorer state in the period initially after independence, the education of girls became far more significant earlier on than in Pakistan. In 2009, almost all Bangladeshi children were able to attend a primary school, whereas approximately 20 % of all girls in Pakistan today do not attend school. An important step was to introduce a scholarship programme for girls in secondary school. Their enrolment figures into secondary school have since increased from 14 % (1990) to 60 % (2013).¹⁹

One of the many results of the investments made is evident in the number of women in employment; for Bangladesh the figure lies at 45 % compared to 26 % in Pakistan.²⁰ The fertility rate has also fallen, from 7 to 2.3 children per woman since 1970, while the figure is considerably higher in Pakistan at 3.8.²¹ Consequently, the population of Bangladesh is expected to grow by approximately 20 % by 2050; by contrast the figure in Pakistan is set to double.²²

Everyone benefits

Education increases not merely indi-

¹⁹ See footnote 1.

²⁰ See footnote 6.

²¹ PRB (2015): World Population Data Sheets, Total Fertility Rate, 1970 and 2014. <http://www.prb.org/DataFinder/Topic/Rankings.aspx?ind=17>, (accessed: 14/11/16).

²² See endnote 15.

vidual and economic wealth; it inspires social change across the board. Demographic changes play an important role in this regard: education, particularly for women, and better life perspectives trigger a “demographic transition”, leading societies out of high fertility rates and high mortality to enjoy lower fertility rates and greater longevity.

Since mortality rates are the first to drop with this transition, while the number of children per woman only decreases after a period of time, particularly large age cohorts grow up in the short term, followed by smaller age groups in the following years. Once the last numerous age groups become old enough to work, society benefits from a proportionally large workforce. They provide a “demographic bonus” and, if they are sufficiently qualified and enough jobs are available, can trigger a large boom for the economy. The “demographic bonus” becomes a “demographic dividend”. In East Asia, around a third of growth results from exploiting this type of demographic dividend.²³

It all depends on the right education

To properly utilise the demographic dividend, education has to focus on meeting the needs of the labour market. In many countries, vocational training has a poorer image than academic study. As a result, more and more secondary school leavers are thronging into overfull universities. And yet many graduates are unable to find a job in the public or private sectors. This is due primarily to the lack of quality university teaching in regard to the extremely high number of students, a high percentage of which study social sciences or the humanities. This is the main reason for such high unemployment amongst academics in North African states, such as Egypt and Tunisia.

How to improve girls' education

The societal benefits of efforts in education become evident only at a later

²³ Bloom, D. E. and Canning, D. (2006): Booms, Busts and Echoes. How the biggest demographic upheaval in history is affecting global development. Finance and Development, 43 (3), pp. 8-13.

date. Education politics therefore need persistency. The following points ought to be taken into account when planning how to funnel investment:

- It must be made possible for all children to receive a good school education, which provides them with at least a lower secondary level qualification. Conditional cash transfers can be offered as incentives for parents to send their children to school instead of to work. Programmes such as *Oportunidades* in Mexico and *Bolsa Família* in Brazil have improved pupils' participation at school.²⁴
- Girls need the same access to education as boys. This applies to all forms of schooling, The opportunities for girls at secondary level are considerably improved through scholarship programmes, for example.
- Girls in particular are affected by crises and should therefore be the key recipients of opportunities for education.
- Success in education depends rather on the actual progress made than on the number of school years completed. Modern curriculums, qualified teachers and a good school infrastructure are required for this. Having more women in teaching positions provides role models for girls and improves their participation in the class.²⁵
- Vocational and tertiary education in particular needs to become more focused on the needs of the labour market. The right incentives and targeted funding can contribute to change in this area.
- Education across the world lacks funding. From 1999 to 2012, the money spent on education amounted to between 13 and 14 % of national budgets across the world.²⁶ Only 2-4 % of interna-

²⁴ Soares, F. et al (2010): Evaluating the Impact of Brazil's Bolsa Família: Cash Transfer Programs in Comparative Perspective. Latin American Research Review 45 (2), pp. 173-190.

²⁵ World Bank Group (2016): Reaching Girls, Transforming Lives. Education Global Practice - Smarter Education Systems for Brighter Futures. Washington DC. www.worldbank.org/education.

²⁶ World DataBank (2016): World Development Indicators. Expenditure on education as % of

tional funds for official development aid are used to provide basic education. The aim should be to reach the recommended UNESCO target to raise government spending on education to between 15 and 20 % of the national budget or to between 4 and 6 % of the gross domestic product.²⁷



Photos

KfW Photo Archive: p. 1, photographer: Bärbel Högner



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total government expenditure (%). Washington DC.

<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>, (accessed on: 20/02/17).

²⁷ UNESCO (2015): Education for All 2000-2015: Achievement and Challenges. Paris.